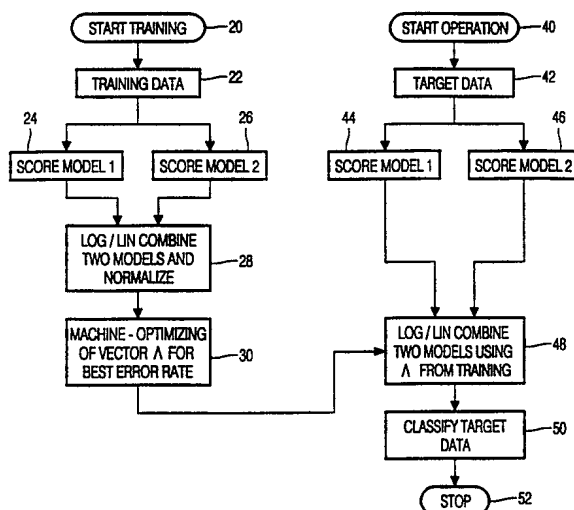




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(54) Title: METHOD OF DETERMINING MODEL-SPECIFIC FACTORS FOR PATTERN RECOGNITION, IN PARTICULAR FOR SPEECH PATTERNS



(57) Abstract

A method for recognizing a pattern that comprises a set of physical stimuli, said method comprising the steps of: providing a set of training observations and through applying a plurality of association models ascertaining various measuring values $p_j(k \ Y \ x)$, $j=1 \dots M$, that each pertain to assigning a particular training observation to one or more associated pattern classes; setting up a log/linear association distribution by combining all association models of the plurality according to respective weight factors, and joining thereto a normalization quantity to produce a compound association distribution; optimizing said weight factors for thereby minimizing a detected error rate of the actual assigning to said compound distribution; recognizing target observations representing a target pattern with the help of said compound distribution.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 98/01990

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: G10L 5/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: G10L, G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5680481 A (K. VENKATESH PRASAD ET AL), 21 October 1997 (21.10.97), page 2, line 25 - line 29; page 20, line 44 - line 46, abstract --	1-5,9
A	WO 9733250 A1 (HEWLETT-PACKARD COMPANY), 12 Sept 1997 (12.09.97), claim 1 -- -----	1-3,5,9

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 ☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

01/06/99

International application No.

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Patent document cited in search report			Publication date	Patent family member(s)		Publication date
US	5680481	A	21/10/97	DE	4435272 A,C	13/04/95
				DE	4317372 A,C	02/12/93
				JP	6043897 A	18/02/94
				US	5586215 A	17/12/96
				US	5621858 A	15/04/97
				US	5771306 A	23/06/98

WO	9733250	A1	12/09/97	EP	0885427 A	23/12/98
				JP	9245124 A	19/09/97
